

STATE OF MINNESOTA  
OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Site Permit  
Application for a 200 MW Large Wind  
Energy Conversion System for the Odell  
Wind Farm in Cottonwood, Jackson,  
Martin, and Watonwan Counties

**TABLE OF CONTENTS**

STATEMENT OF THE ISSUE.....	2
SUMMARY OF CONCLUSIONS AND RECOMMENDATION .....	2
FINDINGS OF FACT .....	2
I.    The Applicant.....	2
II.   Site Permit Application and Related Procedural Background .....	3
III.  Certificate of Need Exemption and Related Procedural Background.....	5
IV.   General Project Description .....	6
V.    Site Location, Characteristics, and Topography .....	7
VI.   Wind Resource Considerations .....	8
VII.  Wind Rights and Easement/Lease Agreements .....	9
VIII. Summary of Public Comments .....	10
IX.   Site Permit Criteria.....	12
X.    Application of Statutory Siting Criteria to the Proposed Project .....	14
A.    Human Settlement .....	14
B.    Zoning and Land Use.....	15
C.    Noise.....	15
D.    Shadow Flicker.....	17
E.    Aesthetic Impacts .....	18
F.    Aviation .....	18
G.    Public Health.....	19
H.    Public Safety .....	20
I.    Public Services and Infrastructure.....	21
J.    Recreational Resources.....	23
K.    Community Benefits .....	25
L.    Effects on Land-Based Economies .....	25
M.    Archaeological and Historical Resources.....	26
N.    Air and Water Emissions.....	27
O.    Wildlife .....	28
P.    Rare and Unique Natural Resources .....	29

Q.	Vegetation.....	30
R.	Soils .....	30
S.	Geologic and Ground Water Resources .....	31
T.	Surface Water and Wetlands .....	31
U.	Future Development and Expansion.....	32
V.	Maintenance.....	32
W.	Decommissioning and Restoration.....	32
XI.	Site Permit Conditions .....	33
CONCLUSIONS OF LAW .....		35
RECOMMENDATION .....		37

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**SUMMARY OF PUBLIC TESTIMONY,  
FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND RECOMMENDATION**

This matter was assigned to Administrative Law Judge (ALJ) Barbara L. Neilson to conduct a public hearing and provide a summary of public testimony on the Site Permit Application of Odell Wind Farm, LLC (Odell or Applicant) for an up to 200 MW wind energy conversion system in Cottonwood, Jackson, Martin, and Watonwan Counties. The Minnesota Public Utilities Commission (PUC or Commission) also requested that the ALJ prepare Findings of Fact, Conclusions of Law and a Recommendation on whether the proposed Project meets the site permitting criteria set forth in Chapter 216F of the Minnesota Statutes and Chapter 7854 of the Minnesota Rules.

A public hearing on the Site Permit Application for the proposed Project was held on March 31, 2014, in Windom, Minnesota. The factual record remained open until April 17, 2014, for the receipt of written public comments. Post-hearing submissions were filed by the Applicant and the Department of Commerce in accordance with the Scheduling Order issued by the ALJ. The Office of Administrative Hearings' (OAH) record closed on April 25, 2014, with the filing of the last post-hearing submission by the Department of Commerce.

Patrick Smith, Director of Environmental Permitting, and Christina K. Brusven, Fredrikson & Byron, P.A., appeared at the public hearing on behalf of the Applicant.

Richard Davis, Environmental Review Manager, appeared on behalf of the Energy Environmental Review Analysis Unit (EERA) of the Department of Commerce (Department).

Michael Kaluzniak, Senior Energy Facility Planner, appeared on behalf of the Commission staff.

## STATEMENT OF THE ISSUE

Has Odell satisfied the criteria set forth in Chapter 216F of the Minnesota Statutes and Chapter 7854 of the Minnesota Rules for a site permit for its proposed up to 200 MW wind energy conversion system in Cottonwood, Jackson, Martin, and Watonwan Counties?

## SUMMARY OF CONCLUSIONS AND RECOMMENDATION

The ALJ concludes that Odell has satisfied the applicable legal requirements and, accordingly, recommends that the Commission grant a site permit for the Project, subject to the conditions discussed below.

Based upon the record created in this proceeding, the Administrative Law Judge makes the following:

## FINDINGS OF FACT

### I. The Applicant

1. Odell Wind Farm, LLC (Odell) is a wholly owned subsidiary of Geronimo Wind Energy, LLC d/b/a Geronimo Energy, LLC (Geronimo).<sup>1</sup>

2. Geronimo has developed three operating wind energy projects in southern Minnesota, including the 200 MW Prairie Rose Project placed in service in December 2012, the 18.9 MW Marshall Wind Farm placed in service in 2009, and the 20 MW Odin Wind Farm placed in service in 2007. The Odin Wind Farm borders the proposed Odell Wind Project.<sup>2</sup>

3. Geronimo has a strategic partnership with Enel Green Power North America, Inc. (EGPNA). EGPNA owns and operates over 90 plants in the United States and Canada with total installed capacity of more than 1.2 GW powered by renewable hydropower, wind, geothermal, solar and biomass energy. As Geronimo's largest shareholder, EGPNA supports Geronimo's project development and working capital needs.<sup>3</sup>

4. The permittee for the Project would be the Applicant Odell.<sup>4</sup>

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<sup>1</sup> Application at 1.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> Order Issuing draft site permit (March 11, 2014), eDocket ID 20143-97230-01.

## **II. Site Permit Application and Related Procedural Background**

5. On September 26, 2013, Odell filed a Site Permit Application with the Commission for a 200 megawatt wind power project in Cottonwood, Jackson, Martin, and Watonwan counties (the Project).<sup>5</sup>

6. On September 27, 2013, the Commission issued a “Notice of Comment Period on Application Completeness.” The Notice requested comments on whether the Commission should find the Application complete within the meaning of the Commission’s rules.<sup>6</sup>

7. On October 11, 2013, the EERA staff filed comments with the Commission on the completeness of Odell’s Application. The EERA staff stated that the Application included the information required by Minn. R. 7854.0500. The EERA staff recommended that the Commission accept the Application as complete with the understanding that pre-construction acoustic bat and raptor surveys be completed, survey data analyzed, and final Tier 3 study reports submitted by December 31, 2013. In addition, EERA staff also recommended that the Applicant have a trained cultural resource professional complete a cultural and archaeological resources study prior to construction.<sup>7</sup>

8. On November 7, 2013, the Commission issued an Order finding the Application substantially complete and referring the matter to the OAH. In its Order, the Commission noted that Odell had agreed to have a trained cultural resource professional complete a cultural and archaeological resources study prior to construction and that it had committed to providing its final 2013 Tier 3 studies by December 31, 2013. The Commission directed Odell to facilitate the EERA’s continued examination of the issues and it also varied the 45-day time period allotted by rule to issue a draft site permit.<sup>8</sup>

9. On November 20, 2013, the Commission issued its Notice of Application Acceptance, Public Meeting, and Comment Period.<sup>9</sup> The notice requested comments on issues to be considered in developing a draft site permit for the Project, including any “unique characteristics” of the proposed Project.<sup>10</sup> Public comments on the site permit Application and issues to be considered in the development of a draft site permit were accepted until December 27, 2013.

10. On November 21, 2013, the Applicant provided notice and mailed copies of the Site Permit Application to government agencies and landowners within the

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<sup>5</sup> Application, eDocket ID No. 20139-91746-02, *et seq.*

<sup>6</sup> Notice of Comment Period on Application Completeness, eDocket ID No.20139-91815-01.

<sup>7</sup> EERA comments on Application completeness at 4-5 (October 11, 2013), eDocket ID 201311-93448-01.

<sup>8</sup> Order Finding Application Complete and Referring the Matter to the Office of Administrative Hearings at 2-3 (November 7, 2013), eDocket ID 201311-93448-01.

<sup>9</sup> Notice of Application Acceptance, Public Meeting and Comment Period (November 20, 2013 ), eDocket ID 201311-93910-01.

<sup>10</sup> *Id.*

Project area. The Applicant mailed notice of its Application to county officials and all township boards and city councils within the project area. The published notice provided: a) a description of the proposed project; b) deadline for public comments on the application; c) a description of the site permit review process; and d) an identification of the public advisor. The notice and distribution of the Application met the requirements of Minn. R. 7854.0600, subps. 2 and 3.<sup>11</sup>

11. The Application acceptance notice was published in the *Fairmont Sentinel* on November 22, 2013, the *Daily Globe* on November 23, 2013, the *Cottonwood County Citizen* on November 27, 2013, and the *Jackson County Pilot* and *St. James Plaindealer* on November 28, 2013.

12. EERA staff held a public “scoping” meeting in Windom, Minnesota on December 9, 2013, to solicit public comment on the scope of the draft site permit.<sup>12</sup> A transcript of the meeting was prepared.<sup>13</sup>

13. On February 10, 2014, the EERA submitted comments, recommendations, and a draft site permit for the Project.<sup>14</sup> The draft site permit language is based on the Commission’s generic Large Wind Energy Conversion System (LWECS) site permit template. The EERA suggested including a special permit condition for avian and bat protection that outlines the specific post-construction fatality survey protocol and reporting requirements to be used at the Project.<sup>15</sup> The EERA also recommended that Odell select a turbine model that will produce the least amount of wind swept area to reduce the potentially lethal zone for birds and bats flying within the Project.<sup>16</sup>

14. On March 10, 2014, the Commission issued a notice of public hearing and availability of the draft site permit.<sup>17</sup> The published notice provided: a) the location and date of the public hearing; b) a description of the proposed Project; c) the name and address of the applicant for the site permit; d) a deadline for public comments on the application and draft site permit; e) a description of the Commission’s site permit review process; f) the location where a copy of the Site Permit Application may be reviewed and how a copy of the application may be obtained; g) a statement of the availability of the draft site permit and h) an identification of the Commission’s public advisor. The notice stated that the hearing would address the Site Permit Application. Topics for public comment at the hearing included: (1) what are the environmental and human impacts of the proposed project and how can these impacts be addressed; (2) are there any changes that should be made to the draft site permit; (3) are there other project-

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<sup>11</sup> Application notice and affidavits of mailing (December 17, 2013), eDocket ID No. 201312-94671-01.

<sup>12</sup> See, Notice of Application Acceptance, Public Meeting, and Comment Period (November 20, 2013) eDocket ID No. 201311-93910-01.

<sup>13</sup> See, Scoping Meeting Transcript (December 9, 2013), eDocket ID No. 20142-96891-01.

<sup>14</sup> EERA Comments and Recommendations (February 10, 2014), eDocket ID No. 20142-96275-01.

<sup>15</sup> *Id.* at 5.

<sup>16</sup> *Id.*

<sup>17</sup> Notice of Availability of Draft Site Permit and Public Hearing (March 10, 2014), eDocket ID No. 20143-97170-01.

related issues or concerns; and (4) should the Commission require a contested case hearing about this project. This notice was posted on eDockets on March 10, 2014, and mailed to interested persons and governmental agencies on the same date.<sup>18</sup>

15. The notice contained all of the information required by Minn. R. 7854.0900, subp. 1, and was sent to interested persons and government agencies specified by Minn. R. 7854.0900, subp. 2.

16. Published notice of the public hearing and availability of the draft site permit appeared in the EQB Monitor on March 17, 2014, the *Cottonwood County Citizen* and the *Fairmont Sentinel* on March 19, 2014, and the *Jackson County Pilot* and the *St. James Plaindealer* on March 20, 2014.<sup>19</sup> The deadline for submitting comments on the draft site permit was April 17, 2014.

17. On the evening of March 31, 2014, the undersigned ALJ presided over a public hearing on Odell's Application in Windom, Minnesota. Commission staff, EERA staff and representatives from Odell Wind Farm were present. Approximately five members of the public attended the public hearing with four people offering comments.<sup>20</sup> The public comments are summarized in Section VIII of this report.

18. On April 17, 2014, Odell submitted comments regarding the draft site permit as well as proposed findings of fact and proposed permit conditions.<sup>21</sup>

19. On April 17, 2014, EERA staff filed comments on Odell's draft site permit conditions and comments relating to Jackson County's wind ordinance.<sup>22</sup> EERA staff noted that Jackson County's wind ordinance provides permit authority for LWECS and includes specific standards that are more stringent than the Commission's Order Establishing General Wind Permit Standards.<sup>23</sup> EERA staff concluded, however, that Odell's Site Permit Application appears to incorporate the more stringent setbacks identified in Jackson County Resolution 10-217.<sup>24</sup>

20. On April 25, 2014, EERA staff provided comments recommending revisions to Odell's proposed findings of fact and permit conditions.

### **III. Certificate of Need Exemption and Related Procedural Background**

21. A Certificate of Need (CN) is required for all "large energy facilities," as defined in Minn. Stat. § 216B.2421, subd. 2(1), unless the facility falls within a statutory exemption from the CN requirements. Because the Project is a generating plant larger

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<sup>18</sup> Notice – Certificate of Service and Service List (March 10, 2014), eDocket ID No. 20143-97170-02.

<sup>19</sup> Affidavit of Publication (April 3, 2014), eDocket ID No. 20144-97951-01.

<sup>20</sup> Public Hearing Transcript (March 31, 2014).

<sup>21</sup> Odell Comments (April 17, 2014), eDocket ID No. 20144-98453-05.

<sup>22</sup> EERA Comments (April 17, 2014), eDocket ID No. 20144-98450-01.

<sup>23</sup> Commission Order Establishing General Wind Permit Standards, January 11, 2008, eDocket ID No. 4897855.

<sup>24</sup> EERA Comments (April 17, 2014), eDocket ID No. 20144-98450-01.

than 50 MW, it meets the definition of a large energy facility and would require a CN prior to issuance of a site permit and construction. The Project is exempt, however, from CN requirements because it was selected by Northern States Power Company d/b/a Xcel Energy (Xcel) as part of a competitive bidding process as a resource to be used to meet Xcel's requirements under Minn. Stat. § 216B.1691, the Renewable Energy Standard. Odell executed a power purchase agreement (PPA) with Xcel for the full output of the facility in July 2013.<sup>25</sup>

22. Xcel filed a petition for approval of the Odell PPA on July 16, 2013, in Docket No. E002/M-13-603. On July 25, 2013, the Commission issued a notice requesting comments on, among other things, whether Odell is exempt from the CN requirements and, if so, which statutory exemption applies. On December 13, 2013, the Commission issued an order finding that the Project would provide Xcel with a reasonable and prudent approach for meeting its obligations under Minn. Stat. § 216B.1691, granting the CN exemption, and allowing the Project to proceed without a CN.<sup>26</sup>

#### **IV. General Project Description**

23. The Project is a Large Wind Energy Conversion System (LWECS), as defined in the Wind Siting Act, Minn. Stat. ch. 216F.<sup>27</sup> The Project is located in southwestern Minnesota, across parts of Cottonwood, Jackson, Martin, and Watonwan Counties.<sup>28</sup> The Project is up to 200 megawatts (MW) in nameplate capacity.<sup>29</sup> Odell continues to assess its turbine options. Odell is evaluating wind turbines with rated power outputs of 1.5 MW, 1.6 MW, and 2.0 MW, which would result in the installation of between 100 and 133 wind turbines.<sup>30</sup>

24. Associated facilities include gravel access roads, improvements to existing roads, underground electrical collection and communication lines, an Operations and Maintenance (O&M) facility, a project substation facility, up to four permanent meteorological towers (up to 80 meters (m) tall), and a temporary batch plant and staging/laydown area for construction of the Project.<sup>31</sup>

25. Odell is also proposing to construct an approximately 9.5-mile, 115 kilovolt (kV) transmission line and a 345/115kV substation adjacent to the point of interconnection to connect the Project to the larger transmission grid. Odell filed a

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<sup>25</sup> Application at 1-2.

<sup>26</sup> Order Approving Acquisitions with Conditions, PUC Docket Nos. E-002/M-13-603 and E-002/M-13-716 (December 13, 2013) at 14-15.

<sup>27</sup> Application at 1.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 3.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

separate route permit application for the transmission facilities, which is being considered in PUC Docket No. IP6914/TL-13-591.<sup>32</sup>

26. Odell incorporated a 1,000-foot setback from residences as well as the distance necessary to meet Minnesota Pollution Control Nighttime Noise Limit of 50 dBA. A 250-foot setback from all public road and trail right-of-way has been incorporated. All turbines will be located a minimum of five rotor diameters (RD) from non-leased properties in the prevailing wind direction (generally the northern and southern edge of leased areas) and three RD in non-prevailing wind direction (generally the eastern and western edge of leased areas) to accommodate disruption of the normal wind flow and protect the wind rights of non-participating landowners. Similarly, internal turbine spacing will be at least five RD prevailing and three RD non-prevailing, with no more than twenty percent (20%) of the Project's turbines closer than the prescribed setback.<sup>33</sup>

27. At the base, or within the tower section, of each turbine, a step-up transformer will be installed to raise the voltage to the power collection line voltage of 34.5 kV. Power will run through an underground and/or aboveground collection system to the Project substation, which will raise the voltage to 115 kV. The electrical collection system will consist of a network of underground electrical cabling operating at 34.5 kV. Approximately 41.5 miles of underground lines will be installed by trenching, plowing, or where needed, directionally boring the cables underground. Generally, the electrical lines will be buried in trenches. Additionally, collector system cabling may go aboveground when it conflicts with existing underground utilities or other infrastructure, or where sensitive environmental conditions such as native prairie remnants cannot be resolved and still keep the line underground. At the public road at the edge of a farm field, the power collection lines will either rise to become aboveground lines (if shallow bedrock, sensitive environmental conditions, or conflicts with underground utility or other infrastructure are encountered) or continue as underground lines. The collection lines will occasionally require an aboveground junction box when the lines from separate spools need to be spliced together.<sup>34</sup>

28. The Applicant anticipates that the Project will begin commercial operation by fourth calendar quarter 2015.<sup>35</sup> The total Project-installed capital costs are estimated to be approximately \$330 million.<sup>36</sup>

## **V. Site Location, Characteristics, and Topography**

29. The Project will be located in southwestern Minnesota, in parts of Cottonwood, Jackson, Martin, and Watonwan Counties, as set forth below:<sup>37</sup>

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<sup>32</sup> *Id.* at 1.

<sup>33</sup> *Id.* at 6.

<sup>34</sup> *Id.* at 12-13.

<sup>35</sup> *Id.* at 87.

<sup>36</sup> *Id.* at 86.

<sup>37</sup> *Id.* at 4.

County	Township Name	Township	Range	Sections
Cottonwood	Lakeside	105N	35W	22, 23, 24, 25, 26, 35, 36
Cottonwood	Mountain Lake	105N	34W	12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
Jackson	Christiana	104N	35W	1, 2, 12
Jackson	Kimball	104N	34W	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 16, 17, 18, 19, 20, 21
Martin	Cedar	104N	33W	4, 5, 6, 7, 8, 9, 16, 17
Watsonwan	Odin	105N	33W	7, 18

30. The Project Area contains approximately 34,592 acres, of which 23,776 are currently leased for the Project.<sup>38</sup> The Project's above-ground facilities will occupy less than one percent of that area.<sup>39</sup>

31. The majority of the Project Area is cultivated farmland. Corn, soybeans, small grains, and forage crops are grown throughout the four counties. Cash crops and livestock production are the major sources of agricultural income.<sup>40</sup>

32. The Project is located in the Minnesota River Prairie subsection of the Department of Natural Resource's Ecological Classification System. The Minnesota River Prairie subsection consists of a gently rolling ground moraine about sixty miles wide. The Minnesota River occupies a broad valley that splits the subsection in half. Ground moraine topography is level to gently rolling. The steepest topography of the subsection is along the Minnesota River and on the Big Stone Moraine. In the Project Area, elevations range from 1,219 feet to 1,412 feet above sea level.<sup>41</sup>

33. The Project is located in a moderately- to lightly-populated rural area in southwestern Minnesota. The communities that are geographically closest to the Project are Bingham Lake and Mountain Lake.<sup>42</sup>

## VI. Wind Resource Considerations

34. In the vicinity of the Project Area, the mean annual wind speed at an elevation of 70 m is mapped as 7.17 to 7.51 meters/second (m/s).<sup>43</sup> Odell has two temporary meteorological towers in the Project Area which have been collecting

<sup>38</sup> *Id.* at 14 and Odell Comments at 2 (April 17, 2014), eDocket ID No. 20144-98453-01.

<sup>39</sup> *Id.* at 51.

<sup>40</sup> *Id.* at 49.

<sup>41</sup> *Id.* at 54.

<sup>42</sup> *Id.* at 14.

<sup>43</sup> *Id.* at 73.

weather data since August of 2010.<sup>44</sup> Odell installed a third meteorological tower in the Project Area that has been collecting weather data since January 2014.<sup>45</sup> Odell's meteorological tower locations are expected to have an average annual wind speed of 8.2 m/s with a potential variation of 5 percent or +/- 0.41 m/s.<sup>46</sup> Regionally, the prevailing wind directions are generally south and northwest. The north and northwest winds typically occur in winter.

35. Wind turbines are sited to have good exposure to winds from all directions with emphasis on exposure to the prevailing wind directions while considering site topography, natural resource features, setbacks, and wind resources. The turbines are typically oriented west-southwest to north-northeast, which is roughly perpendicular to the prevailing southerly and northwest winds. Turbine placement, aside from other resource features where setbacks or wind access buffers are required, will be designed to provide sufficient spacing between the turbines to minimize internal wake losses.<sup>47</sup> Given the prevalence of southerly and northerly winds, the spacing is widest in the north-south direction. Greater or lesser spacing between the turbines or turbine strings may be used in areas where the terrain dictates the spacing. Sufficient spacing between the turbines is utilized to minimize wake losses when the winds are blowing parallel to the turbines. Wake loss occurs when a turbine is spaced too close downwind of another turbine, and therefore, produces less energy and is less cost-effective. Section 4.10 of the site permit addresses turbine spacing.

## **VII. Wind Rights and Easement/Lease Agreements**

36. In order to build a wind facility, a developer needs to secure leases or easement agreements to ensure access to the site for construction and operation of a proposed project. These lease or easement agreements also restrict landowners from engaging in any activities that might interfere with the execution of the proposed Project. Land and wind rights will need to encompass the proposed LWECS, including all associated facilities such as access roads, meteorological towers, and electrical collection system.

37. Odell has worked with landowners to secure sufficient land lease and wind easement/setback easement agreements to build an up to 200 MW (nameplate capacity) wind energy project. Within the approximate 34,952-acre site, Odell currently leases 23,776 acres. Geronimo continues to negotiate with landowners within the Project Area and anticipates adding to the project leasehold to maximize the layout efficiency. All Project facilities have been sited on leased land and the current leasehold is sufficient to accommodate the proposed facilities, required buffers, and turbine placement flexibility needed to avoid natural resources, homes, and other sensitive features.<sup>48</sup> Section 10.1 of the site permit requires the Applicant to

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<sup>44</sup> *Id.* at 74.

<sup>45</sup> Odell Comments at 3 (April 17, 2014), eDocket ID No. 20144-98453-01.

<sup>46</sup> *Id.* at 74.

<sup>47</sup> *Id.* at 87.

<sup>48</sup> *Id.* at 14.

demonstrate it has obtained the wind rights necessary to construct and operate the Project at least fourteen business days before the pre-construction meeting.

### **VIII. Summary of Public Comments**

38. On November 20, 2013, Bob Rosenquist submitted as a comment a newspaper article from the *Michigan Capitol Confidential* concerning recent court decisions finding state renewable energy mandates unconstitutional.<sup>49</sup>

39. On November 25, 2013, Barbara Stussy submitted as a comment a press release from the U.S. Department of Justice regarding Duke Energy Renewables' criminal conviction under the federal Migratory Bird Treaty Act for the death of protected birds at the company's wind projects in Wyoming.<sup>50</sup>

40. At the December 9, 2013, public "scoping" meeting, two members of the public commented in support of the Project. Aaron Backman, the executive director of the Windom Economic Development Authority, stated that the Economic Development Authority and its Board of Commissioners fully support Odell's construction of the wind turbines in Cottonwood, Jackson, Martin and Wantonwan counties. Mr. Backman commented that construction and operation of the wind farm will provide a significant number of construction jobs and will draw additional skilled workers to Southwestern Minnesota. Similarly, Bill Janzen, a landowner located within the Project site, stated that the Project will bring much needed economic diversity to the region and provide landowners the opportunity to generate additional income from their land.<sup>51</sup>

41. EERA staff also received one written comment during the December 9, 2013, scoping meeting from Mike Adrian. Mr. Adrian expressed concern about the Project's effect on bald eagles in the area; micro-climate changes in wind patterns and rainfall amounts; and the Project's effect on farming from generator electrical fields.<sup>52</sup>

42. On December 9, 2013, Bob Rosenquist submitted an Associated Press article that was published in the *Star Tribune* regarding the new thirty-year permitting regulation for wind projects.<sup>53</sup>

43. On December 27, 2013, the Minnesota Department of Natural Resources (DNR) filed comments on Odell's Site Permit Application. The DNR expressed concern that the site is located in the vicinity of wind projects where monitoring indicates higher than expected bat fatalities. Because of this, the DNR recommends that Odell's site permit require Odell to complete fatality surveys.<sup>54</sup> The DNR also recommended that Odell select a turbine model that will reduce the total number of turbines within the project. Fewer turbines will reduce the number of access roads and other infrastructure

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<sup>49</sup> Bob Rosenquist Comment (November 20, 2013), eDocket ID No. 201311-93907-01.

<sup>50</sup> Barbara Stussy Comment (November 25, 2013), eDocket ID No. 201311-94018-04.

<sup>51</sup> Odell Public Meeting Transcript (December 9, 2013), eDocket ID No. 20142-96891-01.

<sup>52</sup> See Scoping Comment Form (December 9, 2013), eDocket ID No. 20142-96980-01.

<sup>53</sup> Bob Rosenquist Comment (December 9, 2013), eDocket ID No. 201312-94417-06.

<sup>54</sup> DNR Comments (December 27, 2013), eDocket ID No. 201312-94936-01 and 20132-94936-02.

needed to support the turbines, and may also reduce the overall collision risk per megawatt.<sup>55</sup>

44. On December 27, 2013, the Minnesota Department of Transportation (MnDOT) filed comments on Odell's Site Permit Application. MnDOT recommended that the site permit include language specifying that the Permittee shall obtain all relevant permits or authorizations from road authorities relating to any electric cables and/or feeder lines that may be proposed to be placed in a public road right-of-way. MnDOT also noted that there may be concerns relating to oversize/overweight hauling of wind turbines and equipment on State Trunk Highway 60 (TH 60) as construction is scheduled to occur on portions of TH 60. MnDOT cautioned that the Permittee will need to coordinate with MnDOT when planning to transport these loads.<sup>56</sup>

45. On January 6, 2014, Bob Rosenquist submitted an article from the *Chicago Tribune* entitled "Struggle over green sources." The article addressed the stress placed on the electrical grid by increases in wind and solar power.<sup>57</sup>

46. On March 24, 2014, Delbert Klassen submitted a comment in opposition to the Project. Mr. Klassen lives in Bingham Lake, about two miles from the proposed Project site, and his mother owns 160 acres in nearby Mountain Lake Township. Mr. Klassen stated that there are already wind turbines to the north and south of his property and he feels they ruin his view and the beauty of the natural environment. He is also concerned about the noise emitted from the wind turbines and the risk to birds. For all of these reasons, Mr. Klassen is opposed to the Project.<sup>58</sup>

47. At the public hearing on March 31, 2014, four members of the public offered comments on Odell's Application.<sup>59</sup> All of the comments were in favor of approving Odell's site permit. One commentator, Scott Rahn, stated that the Project would bring much needed revenue to the area and he praised Geronimo Energy for meeting with landowners and answering their questions. Bill Janzen, a landowner in Cottonwood County, spoke in favor of the Project's potential to diversify the county's agricultural economy and bring in tax revenue. Jonathan Adrian and Harvey Buller also spoke in favor of the Project, and both described their interactions with Odell and Geronimo staff as positive.<sup>60</sup>

48. In a written comment dated April 15, 2014, August Turner stated that he strongly opposes the siting of two turbines (units 81 and 92) east of the private airport on his family farm. Mr. Turner believes that the planned location of these two turbines appears to violate rules prohibiting obstructions of navigable airspace of public and private airports. Mr. Turner noted that he and other members of his family have used the airstrip on their private airport continuously for more than fifty years. He is

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<sup>55</sup> *Id.* at 2.

<sup>56</sup> MNDOT Comments (December 27, 2013), eDocket ID No. 201312-94940-01.

<sup>57</sup> Bob Rosenquist Comment (January 6, 2014), eDocket ID No. 20141-95146-01.

<sup>58</sup> Delbert Klassen Comment (dated March 20, 2014), eDocket ID No. 20144-98070-01.

<sup>59</sup> Public Hearing Transcript (March 31, 2014).

<sup>60</sup> *Id.*

concerned that safe operation of aircraft from his airstrip will be compromised by siting two turbines within the minimum obstruction clearance zone. He requests that Odell select siting locations outside of the clearance zone in order to ensure that he will be able to continue to operate his airstrip in a safe manner.<sup>61</sup>

49. In its comments submitted on April 17, 2014, Odell responded to Mr. Turner's concerns regarding his private airport. Odell stated that it has reviewed its proposed turbine layouts, including the two turbines identified as potential concerns, and it believes they can be shifted slightly during micrositing to ensure that no turbines are placed within the primary and approach surfaces near the Turner Private Airport as required by Section 4.12 of the permit.<sup>62</sup>

50. In a written comment dated April 17, 2014, Aaron Backman, Executive Director of the Windom Economic Development Authority (EDA), expressed Windom EDA's strong support for the Project. Mr. Backman emphasized the employment opportunities and added tax revenue that the Project will bring to southwestern Minnesota. Mr. Backman also praised Geronimo's efforts to work collaboratively with landowners, businesses, local units of government and other interested parties to make the Project a reality.<sup>63</sup>

51. On April 17, 2014, the DNR submitted additional comments on Odell's draft site permit. The DNR supports the plan to require Odell to file an Avian and Bat Protection Plan (ABPP) prior to the Commission's decision regarding issuing the permit. The DNR note an inconsistency in the draft site permit regarding the requirement for a Prairie Protection and Management Plan (PPMP). Condition 4.7 of the draft site permit states that a PPMP must be completed 30 days before the pre-construction meeting. However, page 1 of Attachment 4 states that it must be completed 10 days before the pre-construction meeting. In addition, Figures 6.1-1 and 6.1-2 show a collector line in close proximity to a Dry Hill Prairie in Township 105N, Range 34W, Section 28. The DNR recommends that Odell clarify whether there will be a disturbance within the Dry Hill Prairie prior to the Commission's permitting decision.<sup>64</sup>

52. No other public comments on the Project were received by the ALJ prior to the close of the April 17, 2014 public comment period.

## **IX. Site Permit Criteria**

53. Wind energy developments are governed by Minn. Stat. ch. 216F and Minn. R. ch. 7854. Minnesota Statutes section 216F.01, subdivision 2, defines a "large wind energy conversion system" (LWECS) as any combination of wind energy conversion systems with a combined nameplate capacity of 5 megawatts (5,000 kilowatts) or more. Minnesota Statutes section 216F.03 requires that LWECS be sited

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<sup>61</sup> August Turner Comment (April 15, 2014), eDocket ID No. 20145-99187-01, *citing* Minn. R. 8800.1900.

<sup>62</sup> Odell Comments at 3 (April 17, 2014), eDocket ID No. 20144-98453-01.

<sup>63</sup> Aaron Backman Comment (April 17, 2014), eDocket ID No. 20144-98502-01.

<sup>64</sup> DNR Comment (April 17, 2014), eDocket ID No. 20144-98440-01.

in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.<sup>65</sup>

54. In addition, in deciding whether to issue an LWECS site permit, the Commission is to consider the factors set forth in Minn. Stat. § 216E.03, subd. 7.<sup>66</sup> That provision specifies, in relevant part, that the Commission “shall be guided by, but not limited to, the following considerations:

(1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;

(2) environmental evaluation of sites ... proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;

(3) evaluation of the effects of new electric power generation .... systems related to power plants designed to minimize adverse environmental effects;

(4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;

(5) analysis of the direct and indirect economic impact of proposed sites ... including, but not limited to, productive agricultural land lost or impaired;

(6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site ... be accepted;

(7) evaluation of alternatives to the applicant's proposed site . . . ;

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(9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

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<sup>65</sup> Minn. Stat. § 216F.03; see also, Minn. R. 7854.1000, subp. 3.

<sup>66</sup> See Minn. Stat. § 216F.02(a).

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site ... be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.”<sup>67</sup>

55. The Commission must also consider whether the applicant has complied with all applicable procedural requirements.<sup>68</sup>

56. The Commission’s rules require the applicant to provide information regarding any potential impacts of the proposed project, potential mitigation measures, and any adverse effects that cannot be avoided as part of the application process.<sup>69</sup> No separate environmental review is required for an LWECs project.<sup>70</sup>

## **X. Application of Statutory Siting Criteria to the Proposed Project**

### **A. Human Settlement**

57. The Project Site is in an area of moderate to low population density.<sup>71</sup> There are no incorporated towns within the project boundary.<sup>72</sup> The towns of Bingham Lake and Mountain Lake are closest to the Project.<sup>73</sup> There are approximately 108 homes located within the 34,592 acre Project boundary.<sup>74</sup>

58. The Applicant has committed to a setback of 1,000 feet to all residences, regardless of whether that landowner is participating in the Project. Section 4.2 of the site permit incorporates this setback. Odell will also be required to set back its turbines a minimum of five rotor diameters (between 1,421 feet and 1,804 feet, depending on turbine selection) on prevailing wind direction from non-participating landowners’ property lines and three rotor diameters (between 853 feet and 1,083 feet, depending on turbine selection) on non-prevailing wind direction. This requirement can be found in section 4.0 of the site permit.<sup>75</sup>

59. Sections 4.2, 4.3, and 4.4 of the site permit contain conditions for setbacks from residences and roads.<sup>76</sup> The proposed wind turbine layout will meet or exceed those requirements. As a result, the impact of the proposed Project on human settlement will be minimal.

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<sup>67</sup> Minn. Stat. § 216E.03, subd. 7.

<sup>68</sup> Minn. R. 7854.1000, subd. 3.

<sup>69</sup> Minn. R. 7854.0500, subp. 7.

<sup>70</sup> *Id.*

<sup>71</sup> Application at 14.

<sup>72</sup> *Id.* at Figure 4.1.

<sup>73</sup> *Id.* at 14.

<sup>74</sup> *Id.* at 14.

<sup>75</sup> *Id.* at 7; Order Issuing Draft Site Permit (March 11, 2014), Section 4.0, eDocket ID No. 20143-97230-01.

<sup>76</sup> Order Issuing Draft Site Permit, (March 11, 2014), eDocket ID No. 20143-97230-01.

60. The proposed Project will not result in the displacement of existing residences or structures in siting the wind turbines and associated facilities.

## **B. Zoning and Land Use**

61. The majority of the Project Area is cultivated farmland.<sup>77</sup>

62. Cottonwood, Jackson and Martin Counties have established comprehensive plans. Watonwan County has not adopted a comprehensive plan. The three counties with plans encourage agricultural industries and diversification of economic base. Two of the plans specifically encourage additional renewable energy development.<sup>78</sup>

63. Cottonwood, Martin and Watonwan Counties do not have ordinances that apply to wind energy conversion systems larger than 5 MW or that are otherwise subject to siting and oversight by the state of Minnesota.<sup>79</sup> Jackson County's Development Code includes specific setback requirements for wind energy conversion systems up to 25 MW in size and located within Jackson County, some of which are more stringent than setbacks set forth in the draft site permit. Jackson County provided a letter on April 15, 2014, stating that it had reviewed the proposed possible turbine layouts and draft site permit and determined that the setbacks in the draft site permit were sufficient and that no changes were necessary.<sup>80</sup>

64. Because the Project is proposed to be up to 200 MW, it meets the definition of a LWECs, and it is subject to state regulation.<sup>81</sup>

65. The Project, as proposed, is consistent with existing county zoning and land use plans.

## **C. Noise**

66. The Minnesota Pollution Control Agency (PCA) has adopted noise standards pursuant to Minn. R. ch. 7030 to ensure public health is protected and to minimize citizen exposure to excessive sound levels.<sup>82</sup>

67. Based on Applicant's review of ambient noise levels measured in rural settings with high quality wind resources, typical noise levels range from 30 dBA to 60 dBA on an hourly equivalent sound pressure level (Leq) basis.<sup>83</sup> Typical existing

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<sup>77</sup> Application at 49 and Figure 8.4.

<sup>78</sup> *Id.* at 17-18.

<sup>79</sup> *Id.* at 4-5.

<sup>80</sup> Jackson County Comment (dated April 15, 2014), eDocket ID No. 20144-98530-01.

<sup>81</sup> Application at 1; Minn. Stat. §§ 216F.01, 216F.04.

<sup>82</sup> Minn. R. 7030.0040.

<sup>83</sup> Application at 19.

ambient noise levels in rural areas are dominated by agriculture-related activities, existing wind conditions, local fauna, and proximity to other noise sources.<sup>84</sup>

68. Noise impacts to nearby residents and other potentially affected parties will be factored into the turbine micro-siting process.<sup>85</sup> The Applicant must demonstrate the Project can meet the noise standard pursuant to Minn. Stat. ch. 7030.<sup>86</sup> These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of public health and welfare. These standards are consistent with speech, sleep, annoyance, and hearing conversation requirements for receivers within areas grouped according to land activities by the Noise Area Classification (NAC) system established in Minn. R. 7030.0050. The NAC-1 was chosen for receivers in the project area since this classification includes farm houses as household units. The nighttime  $L_{50}$  limit of 50 dBA is the most applicable stringent state limit.<sup>87</sup>

69. The wind turbines proposed within the Project Area are warranted to generate a maximum apparent sound power level of 103.2 dB(A) to 107.5 dB(A) +/- 2 dB(A) immediately adjacent to the turbine hub. For the purposes of Odell's noise analysis, the lowest hub height under consideration for each turbine model was evaluated. The decibels decrease as the receptor moves further away from the turbine. Assuming a featureless plain and constant attenuation, a single turbine is expected to generate less than 50 decibels at approximately 100 meters.<sup>88</sup>

70. The Applicant's analysis predicts that operation of the Odell Wind Project will not have noise levels of 60 dB(A) or greater during the daytime conditions or 50 dB(A) or greater during the nighttime conditions on any modeled receptor, nor will the cumulative impact on any residence exceed 60 dB(A) or 50 dB(A) when assuming a 40 dB(A) background sound level. The highest monitored background noise levels ranged from 31.0 dB(A) to 41.6 dB(A) for the nighttime condition and 29.6 to 43.9 for the daytime conditions. When assuming background sound levels of 40 dB(A), the total sound levels are predicted to range from 40.0 dB(A) to 46.2 dB(A).<sup>89</sup> Odell will conduct a post-construction noise study. The noise study will determine the noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds.<sup>90</sup> The purpose of the post-construction noise study report is to quantify sound generated by operational LWECS at receptors to compare results to Minnesota Noise Standards, confirm the validity of the pre-construction noise modeling and assess the modeling as a predictor of probable compliance with Minnesota Noise Standards.<sup>91</sup>

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<sup>84</sup> *Id.* at 19.

<sup>85</sup> *Id.* at 25.

<sup>86</sup> Order Issuing Draft Site Permit (March 11, 2014), Section 5.1, eDocket ID No. 20143-97230-01.

<sup>87</sup> Application at 20-21.

<sup>88</sup> *Id.* at 23.

<sup>89</sup> *Id.* at 25.

<sup>90</sup> Order Issuing Draft Site Permit (March 11, 2014), Section 6.6, eDocket ID No. 20143-97230-01.

<sup>91</sup> *Id.* at Section 6.6.

71. Based on this analysis and applicable permit conditions, the noise impacts are not expected to be significant.

#### **D. Shadow Flicker**

72. Shadow flicker caused by wind turbines is defined as alternating changes in light intensity at a given stationary location, or receptor, such as the window of a home. In order for shadow flicker to occur, three conditions must be met: first, the sun must be shining with no clouds to obscure it; second, the rotor blades must be spinning and must be located between the receptor and the sun; and third, the receptor must be sufficiently close to the turbine to be able to distinguish a shadow created by it.<sup>92</sup>

73. Shadow intensity, or how “light” or “dark” a shadow appears at a specific receptor, and its frequency are determined by a number of factors. Closer to a turbine, the blades will block out a larger portion of the sun’s rays and shadows will be wider and darker. Receptors located farther away from a turbine will experience much thinner and less distinct shadows since the blades will not block out as much sunlight. Shadow flicker will be greatly reduced or eliminated within a residence when buildings, trees, blinds, or curtains are located between the turbine and receptor.<sup>93</sup> Shadow flicker consultants generally agree that flicker should not be noticeable at distances over about 10 rotor diameters (1km or 0.6 miles) from a wind turbine.<sup>94</sup>

74. Odell provided a preliminary shadow flicker analysis utilizing both an expected case and a conservative case. In both cases, the shadow flicker modeling included several conservative assumptions, e.g., all receptors are transparent in all directions (i.e., a greenhouse), all houses will have an unobstructed view of the turbines (i.e., without trees or buildings) and turbines are always operating, regardless of wind speed. In the conservative case, the modeling also assumes turbines are always oriented perpendicular to the receptors and skies are always clear and sunny. Under the expected case, no receptors are expected to experience more than 30 hours of shadow flicker per year.<sup>95</sup>

75. As directed by section 6.2 of the site permit, at least fourteen (14) days prior to the pre-construction meeting, the Permittee shall provide data on shadow flicker impacts on each residence of non-participating landowners and participating landowners. Information shall include the results of modeling used, assumptions made, and the anticipated levels of impact from turbine shadow flicker on each residence. Section 6.2 of the draft site permit also requires Odell to provide documentation on its efforts to minimize shadow flicker impacts.<sup>96</sup>

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<sup>92</sup> Application at 28.

<sup>93</sup> *Id.* at 28 – 29.

<sup>94</sup> Environmental Health Division, Minnesota Department of Health, *Public Health Impacts of Wind Turbines*, May 22, 2009, at 14, *available at* <http://www.health.state.mn.us/divs/eh/hazardous/topics/windturbines.pdf>.

<sup>95</sup> Application at Appendix B.

<sup>96</sup> Order Issuing Draft Site Permit (March 11, 2014), Section 6.2, eDocket ID 20143-97230-01.

76. With the adoption of the mitigation measures discussed above, the Project is not expected to result in significant impacts due to shadow flicker.

## **E. Aesthetic Impacts**

77. The construction of the Project would alter the current landscape with the placement of up to 133 turbines. The existing landscape in the Project area is dominated by agricultural crops, farm fields, farmsteads, and isolated groves established as windbreaks to prevent erosion.<sup>97</sup> The area can be classified as rural open space with a gently rolling topography, and several wind projects are already located in the area. There are currently 215 existing commercial scale wind turbines within 10 miles of the Project.<sup>98</sup>

78. The turbines, with heights of up to 493 feet from ground to tip, will be additional prominent features on the landscape.<sup>99</sup> There will be intermittent, expansive views of the turbines to local residents and to passing motorists on local roads.

79. The approximately 133 turbines associated with the Project may have some impact on the area's visual aesthetic.<sup>100</sup> Given that other wind facilities already exist in the general area, the addition of the Project turbines should have a lesser impact that is further reduced by the use of a neutral paint color.<sup>101</sup> The only lights will be those required by the Federal Aviation Administration (FAA).<sup>102</sup> The Project area will retain its overall rural character even with the addition of the new wind turbines. The turbines and associated facilities necessary to harvest the energy from the wind are not inconsistent with existing agricultural practices.

80. Odell has implemented additional actions to reduce the visual impact of the proposed Project. These include careful siting of access roads to avoid Nature Conservancy Land, State Wildlife Management Areas (WMAs), Scientific and Natural Areas and other native prairie or otherwise biologically sensitive areas. Access roads will be located on gentle grades to minimize visible cuts and fills, and otherwise temporarily disturbed land areas will be reseeded with native vegetation to blend in with existing vegetation.

81. The Project is not expected to result in significant aesthetic impacts.

## **F. Aviation**

82. There are three FAA-registered airports located within 20 miles of the Project Area. Jackson Municipal Airport is approximately nine miles south of the Project. The nearest municipal airport is the Windom Municipal Airport, located

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<sup>97</sup> Application at 26.

<sup>98</sup> *Id.* at 26.

<sup>99</sup> *Id.* at 7.

<sup>100</sup> *Id.* at 27.

<sup>101</sup> *Id.* at 9.

<sup>102</sup> Order Issuing Draft Site Permit (March 11, 2014), Section 7.19, eDocket ID No. 20143-97230-01.

approximately 4.3 miles northwest of the Project Area. Turner Field Airport is a private use airport located within the Project Area. Additionally, within the Project Area there are two unregistered private airstrips owned and operated by landowners. Both airstrips are located in Mountain Lake Township, Cottonwood County.<sup>103</sup> Odell is coordinating with the Windom Municipal Airport, Jackson Municipal Airport, three private airports/airstrips, the FAA, and the MnDOT prior to construction to understand potential impacts.<sup>104</sup>

83. Other air traffic may be present near the Project Area for crop dusting of agricultural fields. Crop dusting is typically carried out during the day by highly maneuverable airplanes or helicopters. The installation of wind turbine towers in active croplands and installation of aboveground collection lines, if needed, will create a potential collision risk with crop-dusting aircraft. However, aboveground collection lines are expected to be similar to existing distribution lines (located along the edges of fields and roadways) and the turbines themselves would be visible from a distance and lighted according to FAA guidelines.<sup>105</sup>

84. The FAA reviewed Odell's preliminary turbine layout for the Project which resulted in "No Hazard" determinations. The FAA reviewed turbines with total height of up to 499 feet. If taller turbines are used, or if the project layout changes from what was provided to the FAA, Odell will re-file with the FAA to make it aware of the changes.<sup>106</sup>

85. To address the concerns expressed by August Turner regarding the use of his private airport, Odell stated that it has reviewed its proposed turbine layouts and believes they can be shifted slightly during micrositing to ensure that no turbines are placed within the primary and approach surfaces near the Turner Private Airport as required by Section 4.12 of the permit.<sup>107</sup>

86. It is not anticipated that the construction and operation of the proposed Project will have a significant impact on aviation.

## **G. Public Health**

87. Human health in a region is a function of demographics, environmental quality, social and behavioral trends, and access to health care. On average, the Project area is in a region of Minnesota that experiences three days of unhealthy air pollutant levels each year. Various regions in the State experience up to 33 days of unhealthy air pollutant levels annually.<sup>108</sup> As MPCA notes in its 2013 report to the Minnesota Legislature (Minnesota Pollution Control Agency, 2013):

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<sup>103</sup> Application at 44-45.

<sup>104</sup> *Id.* at 46.

<sup>105</sup> *Id.* at 46-47.

<sup>106</sup> *Id.* at 47.

<sup>107</sup> Odell Comments at 3 (April 17, 2014), eDocket ID No. 20144-98453-01.

<sup>108</sup> Application at 43.

Air pollution can cause breathing problems, itchy throats, burning eyes, and trigger asthma and bronchitis attacks. It contributes to cancer, heart attacks, and other serious illnesses. Even healthy, athletic adults can be harmed by breathing air pollutants. Young children may be more susceptible to health problems from air pollution because of their small size and rapid breathing. The elderly and people with heart and lung conditions are also at increased risk of harm from air pollution.<sup>109</sup>

88. Specific to the Odell project, the MPCA provided comments to the Commission regarding the power purchase contract between Odell and Xcel Energy as well as two other 200 MW wind energy projects from whom Xcel intends to purchase power. Using MPCA's analysis of the PPA documents, it is estimated that the Project will generate between \$20 and \$50 million in health savings from year 2017 and beyond because of reduction in air pollutants.<sup>110</sup>

89. Possible health concerns associated with wind turbines and transmission of electricity generally include those from electric and magnetic fields (EMF). The term EMF refers to electric and magnetic fields that are present around electrical devices. Electric fields arise from the voltage or electrical charges and magnetic fields arise from the flow of electricity or current that travels along transmission lines, power collection (feeder) lines, substation transformers, house wiring and electrical appliances.<sup>111</sup>

90. EMF from underground electrical collection lines dissipates very close to the line because they are installed below ground within insulated shielding. The electrical fields are negligible, and there is a small magnetic field directly above the lines that, based on engineering analysis, dissipates within 20 feet on either side of the installed cable. EMF associated with the transformers at the base of each turbine completely dissipates within 500 feet from the transformer, so the 1,000-foot turbine setback from residences will be adequate to avoid any EMF exposure to homes.<sup>112</sup>

91. While the general consensus is that electric fields pose no risk to humans, the question of whether exposure to magnetic fields potentially can cause biological responses or even health effects continues to be the subject of research and debate. Based on the most current research on electromagnetic fields, and the distance between any turbines or collector lines and houses, the Project is not expected to have significant impacts to public health and safety due to EMF.<sup>113</sup>

## **H. Public Safety**

92. The draft site permit includes conditions to address public safety. In accordance with those conditions, Odell will prepare an emergency response plan (fire protection and medical emergency plan) in consultation with the emergency responders

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<sup>109</sup> *Id.* at 43-44.

<sup>110</sup> *Id.* at 45-46.

<sup>111</sup> *Id.* at 44.

<sup>112</sup> *Id.* at 46.

<sup>113</sup> *Id.* at 46.

having jurisdiction over the Project area.<sup>114</sup> As with any large construction project, some risk of worker or public injury exists during construction. Odell and its construction representatives and workers will prepare and implement work plans and specifications in accordance with applicable worker safety requirements during construction of the Project. It will also control public access to the Project during construction and operation. Odell will provide security during construction and operation of the Project, including fencing, warning signs, and locks on equipment and facilities. It will also provide landowners, interested persons, public officials and emergency responders with safety information about the Project and its facilities.<sup>115</sup>

93. In addition, each turbine will be clearly labeled to identify each unit, and a map of the site with the labeling system will be provided to local authorities as part of the emergency response plan.<sup>116</sup>

94. No significant impacts to public safety are expected to result from construction and operation of the Project.

#### **I. Public Services and Infrastructure**

95. During the construction phase of the Project, temporary impacts are anticipated in some public roads within the Project Area. Roads will be affected by the wear and tear caused by vehicle trips required to deliver materials and equipment to and from the Project. Some specific routes will also be impacted by the temporary expansion of road widths and/or intersections to facilitate the safe and efficient delivery of equipment.<sup>117</sup> Impacted roadways will be restored and improved per a formalized road agreement between Odell and relevant local governments.<sup>118</sup>

96. The Project may also temporarily affect traffic numbers in the area. Construction traffic will use existing roadways to access the Project Area and deliver construction materials and personnel. The maximum construction workforce is expected to generate approximately 250 additional vehicle trips per day.<sup>119</sup> Odell will ensure that the general contractor communicates with the relevant road authorities throughout the construction process, particularly regarding the movement of equipment on roads and the terms of the road agreement.<sup>120</sup>

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<sup>114</sup> *Id.* at 48; Order Issuing Draft Site Permit (March 11, 2014), Section 7.17, eDocket ID No. 20143-97230-01.

<sup>115</sup> *Id.* at 48; Order Issuing Draft Site Permit (March 11, 2014), Sections 7.16 and 7.17, eDocket ID No. 20143-97230-01.

<sup>116</sup> *Id.* at 48; Order Issuing Draft Site Permit (March 11, 2014), Sections 7.17 and 7.18, eDocket ID No. 20143-97230-01.

<sup>117</sup> *Id.* at 34.

<sup>118</sup> *Id.* at 35.

<sup>119</sup> *Id.* at 34.

<sup>120</sup> *Id.* at 35.

97. After construction is complete, traffic impacts during the operations phase of the Project will be minimal.<sup>121</sup>

98. The Project will include permanent all-weather gravel roads that provide access to the wind turbines. The primary function of the roads is to provide accessibility to the turbines for turbine maintenance crews. The roads will be low-profile to allow farm equipment to cross. Roads will initially be approximately 34 feet wide to accommodate transportation of heavy construction equipment. Once Odell completes construction of the turbines, the roads will be reduced to their permanent width of 16-18 feet. Odell will take landowners' input on road locations and concerns of local road authorities into consideration.<sup>122</sup>

99. The draft permit includes conditions regarding access roads. In accordance with those conditions, access roads will be constructed in compliance with all necessary township, county and state road requirements and permits.<sup>123</sup> Access roads will also be built in compliance with DNR rules and requirements.<sup>124</sup>

100. No railroads are located within the Project Area. Two underground gas pipelines run diagonally through the Project. One pipeline operated by Northern Border Pipeline Company runs from the northwest corner of the project in Cottonwood County through to the southeast part of the Project in Jackson County. The other pipeline, which is owned by Northern Natural Gas Company, runs diagonally in a southwest/northeast trajectory in the western part of the Project in Lakeside Township in Cottonwood County.<sup>125</sup>

101. Northern States Power's Lakefield Junction-Field/Wilmarth 345 kV transmission line runs diagonally across the southeast part of the Project in Martin County. Missouri River Energy's Odin Tap to Odin 69 kV line is an underground line that runs near the boundary of Martin and Watonwan Counties. Distribution lines are present, but infrequent in the Project Area.<sup>126</sup>

102. Odell will coordinate with Gopher State One Call and the pipeline companies before and during construction to fully understand infrastructure and safety concerns and to prevent possible structural conflicts.

103. Telecommunications infrastructure and services could potentially be impacted by the Project's construction or operations including underground telephone and fiber optic cables.<sup>127</sup> Feeder lines also have been identified as potentially impacting telephone land lines.<sup>128</sup> If the Project negatively impacts telecommunications services,

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<sup>121</sup> *Id.* at 35.

<sup>122</sup> *Id.* at 13.

<sup>123</sup> Order Issuing Draft Site Permit (March 11, 2014), Section 7.8.2, eDocket ID No. 20143-97230-01.

<sup>124</sup> *Id.*, Sections 4.6 and 7.8.2.

<sup>125</sup> Application at 34.

<sup>126</sup> *Id.* at 34.

<sup>127</sup> *Id.* at 35.

<sup>128</sup> *Id.* at 35.

Odell will provide a specific mitigation plan and take the necessary steps to restore all impacted service.<sup>129</sup> Odell will execute the necessary steps after the Project is constructed because it is very difficult to predict what services may ultimately be impacted (if any) before the project is constructed.<sup>130</sup> Telecommunications providers in the Project Area include: Citizens Telecommunications Company of Minnesota, LLC; Integra Telecom of Minnesota, Inc.; Iconex Communications North, Inc.; NOS Communications Inc.; Qwest Corporation; Sprint Communications Company L.P.; Frontier Communications of Minnesota, Inc.; Embarq Minnesota, Inc. d/b/a CenturyLink; Windstream Lakedale Link, Inc.; and USLink, Inc. d/b/a TDS METROCOM.<sup>131</sup>

104. The Applicant has conducted a microwave beam path analysis, which did not identify any beam paths in the Project Area.<sup>132</sup> Prior to construction, the Applicant will conduct an off-air television reception analysis of the Project.<sup>133</sup> The Applicant will not operate the wind farm so as to cause microwave, television, radio, telephone, or navigation interference contrary to FCC regulations or other law.<sup>134</sup> In the event the wind farm or its operation causes such interference, the Applicant will take the steps necessary to correct the problem. Section 6.4 of the site permit requires the Applicant to submit a plan to conduct an assessment of television signal reception and microwave signal patterns in the project area.

105. Odell's construction, operation, and maintenance of the proposed wind plant will be required to comply with all of the applicable federal, state, and local permit requirements.<sup>135</sup>

106. No significant impacts to public services and infrastructure are expected to arise from the construction and operation of the Project.

## **J. Recreational Resources**

107. Minnesota Wildlife Management Areas (WMAs) are established and designed to provide wildlife habitat, improve wildlife production, and provide public hunting and trapping opportunities. There are no WMAs within the Project Area.<sup>136</sup> There are two WMAs adjacent to the west side of the Project: Banks WMA and Bennett WMA.<sup>137</sup> WMAs less than ten miles from the Project Area include: Arnolds Lake, Arzt, Bootleg Lake, Caraway, Caron, Carpenter, Curry, Delft, Ewy Lake, Fossum, Four Corners, Laurs Lake, Lillegard, Little Swan, Mountain Lake, Regehr, Rooney Run,

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<sup>129</sup> *Id.* at 36.

<sup>130</sup> *Id.* at 36.

<sup>131</sup> *Id.* at 33.

<sup>132</sup> *Id.* at 33.

<sup>133</sup> *Id.* at 33.

<sup>134</sup> *Id.* at 35.

<sup>135</sup> See, Order Issuing Draft Site Permit (March 11, 2014) Section 10.5, eDocket ID 20143-97230-01.

<sup>136</sup> Application at 41.

<sup>137</sup> *Id.* at 41.

Seymour Lake, Sulem Lake, Timber Lake, Toe, Turtle, Watline, Wilder, Willow Creek, and Wolf Lake.<sup>138</sup>

108. Scientific and Natural Areas (SNAs) are areas designed to protect rare and endangered species habitat, unique plant communities, and significant geologic features that possess exceptional scientific or educational values. There are no SNAs within the Project Area. SNAs located within ten miles of the Project Area include: Des Moines River, Holthe Prairie, and Prairie Bush Clover.<sup>139</sup>

109. The U.S. Fish and Wildlife Service (USFWS) Waterfowl Production Areas (WPAs) are managed to protect breeding, forage, shelter, and migratory habitat for waterfowl or wading birds, such as ducks, geese, herons, and egrets. WPAs provide opportunities for viewing wildlife and intact ecosystems. There are no WPAs within the Project Area. WPAs less than ten miles from the Project Area include: Christiana, Blixseth, Bootlake, Cottonwood Lake, Fish Lake, Harder Lake, Mountain Lake, Primrose, String Lake, Swan Lake, Timber Lake, Watonwan River, and Wolf Lake.<sup>140</sup>

110. The USFWS administers a program under which it holds easements on private lands that have wetlands and/or grassland habitat. The MDNR and MN Board of Water and Soil Resources also administer conservation programs such as Reinvest in Minnesota. Development may be restricted on lands held in a conservation easement. No easements are known to exist within the project area. The USFWS has been contacted to verify the presence or lack of easements. Odell will avoid conducting Project activities within conservation easements to the extent practicable. To the extent impacts do occur, Odell will work with the relevant agency to develop appropriate mitigation.<sup>141</sup>

111. No National Wildlife Refuges (NWRs) were identified within ten miles of the Project Area.<sup>142</sup>

112. Kilen Woods State Park is located within ten miles of the Project Area.<sup>143</sup> There are six recreational trails (CR79, SCAH24, Des Moines River, Elm Creek Trail, a Park Entrance Road, and an Unnamed Trail (in Kilen Woods State Park)) and three snowmobile trails (Kilen Woods State Park Trails, Cottonwood-Jackson County Snowmobile Trail, and the Riverside Trail) outside of the Project Area but within ten miles.<sup>144</sup>

113. Project turbines and facilities will not be located within public parks, trails, WPAs, WMAs, or in USFWS lands. Turbines will be set back from public lands based on a minimum of the 3 RD by 5 RD setbacks from all non-leased properties per the

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<sup>138</sup> *Id.* at 41-42.

<sup>139</sup> *Id.* at 42.

<sup>140</sup> *Id.* at 42-43.

<sup>141</sup> *Id.* at 18-19.

<sup>142</sup> *Id.* at 43.

<sup>143</sup> *Id.* at 41.

<sup>144</sup> *Id.* at 41.

LWECS Application Guidance, and at least 250 feet from public trails or the distance required by county ordinance, if applicable.<sup>145</sup>

114. The construction and operation of the proposed Project is not expected to have a significant adverse effect on existing recreational resources.

#### **K. Community Benefits**

115. The Project will pay a wind energy production tax to local units of government. This production tax credit is \$0.0012 per kWh of electricity produced, resulting in an annual wind energy production tax payment of approximately \$850,000.00.<sup>146</sup> Landowners having turbine or other Project facilities on their land will receive a royalty or lease payment annually for the life of the Project.<sup>147</sup>

116. Local contractors and suppliers will be used for portions of the construction.<sup>148</sup> The Project is expected to create new job opportunities within the local community, both during construction and operation.

117. Odell will form the “Odell Community Fund,” a 501(c)(3) organization for the purpose of engaging in and contributing money to the support of charitable activities within the communities near the Project.<sup>149</sup> Assuming the Project is constructed at 200 MW, Odell will contribute \$40,000 annually to the Odell Community Fund.<sup>150</sup> The funds will be administered by a volunteer board of directors consisting of participating landowners, township officials, and one at-large community member.<sup>151</sup>

#### **L. Effects on Land-Based Economies**

118. The majority of the Project Area is cultivated farmland.<sup>152</sup> Cultivated land comprises approximately 32,151 acres (approximately 93 percent) of the Project Area. Grasslands comprise approximately 427 acres (approximately 1 percent) of the site. Land will be taken out of agricultural production where the turbines and access roads are located (approximately 0.5 to 1 acre per turbine).<sup>153</sup> Less than one half of one percent of the Project Area will be permanently converted to non-agricultural land use.<sup>154</sup> Once the wind turbines are constructed, all land surrounding the turbines and access roads may still be farmed.<sup>155</sup> The conversion of agricultural land to a site for a wind energy facility will not result in the loss of any agricultural-related jobs or any net loss of income.

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<sup>145</sup> *Id.* at 43.

<sup>146</sup> *Id.* at 53.

<sup>147</sup> *Id.* at 53.

<sup>148</sup> *Id.* at 53.

<sup>149</sup> *Id.* at 53.

<sup>150</sup> *Id.* at 53.

<sup>151</sup> *Id.* at 53.

<sup>152</sup> *Id.* at 49.

<sup>153</sup> *Id.* at 51.

<sup>154</sup> *Id.* at 51.

<sup>155</sup> *Id.* at 52.

119. Odell will coordinate with property owners to identify features on their property, including drain tile, which should be avoided.<sup>156</sup> Any permanent impact to drain tile will be avoided by Odell. Although avoidance of drain tile is a goal, Odell recognizes that the excavation and heavy equipment associated with construction may cause damage to known or unknown drain tiles. If drain tile damage occurs during construction or operations, the tile will be repaired as soon as possible and according to the land lease and wind easement agreement between Odell and the landowner.<sup>157</sup>

120. Odell will avoid impacts to Reinvest in Minnesota (RIM) land and will minimize impacts to Conservation Reserve Program (CRP) land.<sup>158</sup>

121. Negative impacts to mining are not anticipated. Sand and gravel operations tend to be small and other occurrences of these materials are likely to be present in nearby areas, including large commercial operations in the general area.<sup>159</sup> Odell does not know of any gravel pits located within the Project Area.<sup>160</sup> There are no active industrial pits or quarries in the Project Area.<sup>161</sup>

#### **M. Archaeological and Historical Resources**

122. Odell completed a records search at the State Historic Preservation Office (SHPO) on June 12, 2013, to identify previously recorded and reported archaeological and architectural sites within a half-mile of the Project Area.<sup>162</sup> No previously recorded archaeological sites have been identified within the Project Area.<sup>163</sup> Two architectural sites have been identified within the Project Area.<sup>164</sup> None of these have been evaluated for *National Register* eligibility.<sup>165</sup> The architectural sites within the Project Area include a school and a historic farm consisting of a house, barn, granary, garage, and chicken shed.<sup>166</sup> Within one mile of the exterior Project boundaries, six archaeological and five historic structures have been identified.<sup>167</sup> One of these archaeological sites (21CO0001) is listed on the *National Register*.<sup>168</sup> The remaining sites have not been evaluated for *National Register* eligibility.<sup>169</sup> These sites include a school, general store, and other historic sites.<sup>170</sup>

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<sup>156</sup> *Id.* at 51.

<sup>157</sup> *Id.* at 51.

<sup>158</sup> *Id.* at 51.

<sup>159</sup> *Id.* at 51.

<sup>160</sup> *Id.* at 50.

<sup>161</sup> *Id.* at 50.

<sup>162</sup> *Id.* at 37.

<sup>163</sup> *Id.* at 37.

<sup>164</sup> *Id.* at 37.

<sup>165</sup> *Id.* at 37.

<sup>166</sup> *Id.* at 39.

<sup>167</sup> *Id.* at 37.

<sup>168</sup> *Id.* at 38.

<sup>169</sup> *Id.* at 37.

<sup>170</sup> *Id.* at 39.

123. Section 6.3 of the draft site permit requires the Applicant to conduct an archaeological reconnaissance survey (Phase I).<sup>171</sup> In concurrence with the SHPO recommendation, Odell will conduct a Phase I archaeological resources inventory. The archaeological resource inventory will focus on areas proposed for project construction, including wind turbine locations, associated access roads, electrical cables and other construction elements. These investigations will be conducted by professionals who meet the Secretary of the Interior's Standards for Archaeology as set forth in 36 C.F.R. Part 6. Survey strategies for the archaeological resource inventory will depend on surface exposure and the characteristics of the landforms proposed for development. After receiving the proposed turbine, access road, and electrical cable layouts, archaeologists will design an appropriate survey strategy for archaeological resources.<sup>172</sup>

124. If any archaeological sites are found during the Phase I survey, their integrity and significance should be addressed in terms of the site's potential eligibility for placement on the National Register of Historic Places (NRHP). If such sites are found to be eligible for the NRHP, appropriate mitigative measures will need to be developed in consultation with the SHPO, the State Archaeologist, and consulting American Indian communities.<sup>173</sup> Section 6.3 of the draft site permit also requires the Applicant to stop work and notify the SHPO and the Commission if any unrecorded cultural resources are found during construction.<sup>174</sup>

125. Odell will coordinate with SHPO in the event that new, unrecorded sites are discovered during any phase of the Project. Before the Project's construction, Odell will also prepare an Unanticipated Discoveries Plan. The plan will detail a process for prompt communication and action regarding the discovery of previously unknown archaeological resources or human remains should they be encountered. Once the plan is fully developed, Odell will submit it to SHPO for review and approval.<sup>175</sup>

## **N. Air and Water Emissions**

126. The Applicant states that it will apply to the MPCA for a National Pollution Discharge Elimination System (NPDES) permit to discharge stormwater from construction facilities. It will also employ Best Management Practices (BMP) during construction and operation of the Project to protect topsoil to minimize soil erosion and control dust.<sup>176</sup>

127. No harmful air or water emissions are expected from the construction and operation of the Project.

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<sup>171</sup> Order Issuing Draft Site Permit (March 11, 2014) Section 6.3, eDocket ID No. 20143-97230-01.

<sup>172</sup> Application Appendix C.

<sup>173</sup> *Id.*

<sup>174</sup> Order Issuing Draft Site Permit (March 11, 2014) Section 6.3, eDocket ID No. 20143-97230-01.

<sup>175</sup> Application at 40.

<sup>176</sup> *Id.* at 55.

## O. Wildlife

128. It is anticipated that the level of bird and bat mortalities associated with the Project would not exceed what has been observed at other wind generation facilities in the area. Additionally, the Project would be classified as “low risk.”<sup>177</sup> The Applicant is committed to utilizing various methods in order to minimize wildlife impacts within the Project Area during construction, design, and operations.<sup>178</sup>

129. Odell has prepared an Avian and Bat Protection Plan (ABPP) for the Project. The ABPP summarizes wildlife habitat in the Project area. It also describes design, construction and operation standards to be used to minimize impacts to bird and bat species. The ABPP was prepared in consultation with the USFWS, MDNR and EERA staff.<sup>179</sup> The ABPP describes the environmental studies that were undertaken and will be completed to identify potential sensitive resources and incorporates best management practices (BMPs) that will be implemented in order to avoid and minimize impacts to birds and bats.<sup>180</sup> Such practices include: steps to identify and mitigate impacts to avian and bat species during construction and operation; formal and incidental monitoring; project-specific training; wildlife handling documentation and reporting protocols; quarterly avian and bat reports; immediate incident reports; and annual reporting and auditing of the ABPP implementation.<sup>181</sup>

130. Section 6.7 of the site permit requires the Applicant comply with its ABPP, submit quarterly avian and bat reports, and report the discovery of dead or injured birds or bats. Section 6.1 requires the Applicant to conduct pre-construction desktop and field inventories of potentially impacted native prairies, wetlands, and any other biologically sensitive areas within the site and assess the presence of state threatened, endangered, or species of special concern or federally listed species. Section 6.1 also requires the Applicant to submit any biological survey or studies conducted. Section 4.5 requires that turbines and associated facilities will not be constructed in wildlife management areas, state scientific and natural areas, or parks, and a setback of five rotor diameters in prevailing wind and three rotor diameters in non-prevailing wind is applied to such public lands.<sup>182</sup>

131. Impacts to wildlife from construction and operation of the proposed Project are expected to be minimal. Bird and bat fatalities will be avoided or minimized through the implementation of the final ABPP. Impacts to other wildlife will be avoided or minimized through the Project design and permit conditions.<sup>183</sup> For example, the Applicant will minimize clearing of trees and shrubs; place collector lines underground to

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<sup>177</sup> DNR Low Risk Protocol Monitoring Summary (December 27, 2013), eDocket ID No. 201312-94936-02, and DNR Comments (December 27, 2013), eDocket ID No.201312-94936-01.

<sup>178</sup> Application at 67-68.

<sup>179</sup> Applicant Comments (April 17, 2014), eDocket ID No. 20144-98453-01.

<sup>180</sup> ABPP, Applicant's Comments (April 17, 2014) eDocket ID 20144-98453-03.

<sup>181</sup> ABPP, Applicant's Comments (April 17, 2014) eDocket ID 20144-98453-03.

<sup>182</sup> Order Issuing Draft Site Permit (March 11, 2014), Sections 6.7, 6.1, and 4.5, eDocket ID 20143-97230-01.

<sup>183</sup> Application at 67-68.

avoid avian collision risk; minimize lighting while meeting the FAA's minimum requirements; and follow the Avian Power Line Interaction Committee's (2006) guidelines for overhead utilities maintenance where possible.<sup>184</sup>

## **P. Rare and Unique Natural Resources**

132. The Applicant obtained information from the Minnesota National Heritage Information System (NHIS) database regarding records of rare species.<sup>185</sup> The NHIS database requests in 2008, 2009, and 2013 reported records for the State Threatened Sullivant's milkweed, State Special Concern phlox moth, and State Endangered Henslow's sparrow in or adjacent to the Project Area.<sup>185</sup>

133. The USFWS identified the Poweshiek skipperling and the prairie bush clover as being within possible range of the Project Area. The Poweshiek skipperling is a federal candidate species and a state special concern species found in native prairie remnants. The prairie bush clover is a federal and state threatened species typically found in dry prairie sites.<sup>186</sup>

134. Three state special concern species were observed in the Project Area during the Tier 3 Surveys: bald eagle, Franklin's gull, and American white pelican. None of these species are protected by the federal Endangered Species Act.<sup>187</sup>

135. The Minnesota NHIS in 2008, 2009, and 2013 reported records for five native plant community locations. Three of the four known prairie locations were railroad prairies approximately two miles northwest of the Project Area. The fourth known prairie is located in the northeastern portion of the Project Area. The final identified native plant community is a Basswood-Burr Oak forest located a half mile outside the Project Area's northern boundary.<sup>188</sup>

136. The Minnesota County Biological Survey (MCBS) has completed a survey of this area for native plant communities. The 82-acre mesic prairie in the northeast corner of the Project Area is mapped as a site of high biodiversity significance. Native plant communities were identified at Bank and Bennett WMAs on the northern boundary of the Project Area. There is another 18-acre dry hill prairie of moderate biodiversity significance along the Project Area's northern border, and a 121-acre dry hill prairie with modern biodiversity was identified in the center of the Project Area along the South Fork of Watonwan Creek. Finally, a 67-acre site just below the threshold for statewide significance occurs in the northeast corner of the Project Area, along the judicial ditch just south of Sulem Lake WMA.<sup>189</sup>

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<sup>184</sup> *Id.*

<sup>185</sup> Application at 68.

<sup>186</sup> *Id.* at 69.

<sup>187</sup> *Id.* at 69.

<sup>188</sup> *Id.* at 71.

<sup>189</sup> *Id.* at 71.

137. Impacts to rare and unique natural resources are expected to be minimal. Impacts to Sullivant's milkweed, phlox moth, and, if present, Poweshiek skipperling and prairie bush clover can be avoided by avoiding impacts to prairie remnants. The Applicant will avoid native plant community resources, including prairie remnants to the extent practicable. In particular, the Applicant will avoid all "Sites of Biodiversity Significance" ranked as "Outstanding," "High," or "Moderate" and will coordinate with the DNR if impacts are proposed to sites ranked as "Low" or "Below."<sup>190</sup> In addition, the draft site permit provides that the Permittee will develop a Prairie Protection and Management Plan in consultation with the Commission, EERA, and DNR. The draft site permit further specifies that project construction cannot impact native prairie unless it is addressed in the Prairie Protection Management Plan<sup>191</sup>

## **Q. Vegetation**

138. Vegetation will be removed for the installation of turbine pads, access roads, substations, and operations and maintenance facilities. It is expected that the majority of the turbines will be sited in plowed crop fields that are typically planted in row crops. Access roads in the agricultural landscape are expected to impact crop fields, and potentially grassed areas of ditches and roadsides, or small wooded areas. Temporary vegetation impacts will be associated with crane walkways, the installation of underground collection lines, and contractor staging and lay down areas. With ground disturbance and equipment deliveries from different geographic regions, Odell will work together with all parties entering the Project Area to control and prevent the introduction of invasive species. To the extent practicable, direct permanent and temporary impacts to natural areas, including wetlands and native prairies, will be avoided and minimized.<sup>192</sup>

139. The draft site permit provides that the Permittee will develop a Prairie Protection and Management Plan in consultation with the Commission, EERA, and DNR. The draft site permit also specifies that project construction cannot impact native prairie unless it is addressed in the Prairie Protection Management Plan<sup>193</sup>

## **R. Soils**

140. Construction of the turbines and access roads can increase the potential for erosion and sedimentation. Soil compaction is another impact associated with the construction of the Project. Erosion control methods such as silt fence and temporary mulch will be used during construction. In areas where soil compaction occurs, Odell will use soil decompaction methods to restore the soil.<sup>194</sup>

141. The draft site permit has requirements to implement sound water and soil conservation practices during construction and operation of the Project throughout the

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<sup>190</sup> *Id.* at 71.

<sup>191</sup> Order Issuing Draft Site Permit, Section 4.7, eDocket ID No. 20143-97230-01.

<sup>192</sup> Application at 62.

<sup>193</sup> Order Issuing Draft Site Permit, Section 4.7, eDocket ID No. 20143-97230-01.

<sup>194</sup> Application at 55.

Project's life in order to protect topsoil and adjacent resources and to minimize soil erosion. The Project will be subject to the requirements of the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) stormwater permit for construction activity. An erosion and sediment control plan and Storm Water Pollution Prevention Plan (SWPPP) will also be prepared for the Project and the disturbed areas will be seeded after construction to stabilize the area.<sup>195</sup>

## **S. Geologic and Ground Water Resources**

142. The Project is located on deposits of glacial till more than 150 feet thick. The underlying bedrock is Sioux Quartzite. There is some Cretaceous Shale and sandstone on top of the quartzite. The Cretaceous strata are largely eroded away, occurring as discontinuous islands of variable thickness. The glacial sediments are mostly unsorted till that is predominantly loam and silt. No adverse geological conditions, such as sinkholes, are expected in the Project Area. Impacts to geologic and groundwater resources are not anticipated.<sup>196</sup>

## **T. Surface Water and Wetlands**

143. The Project will not require the appropriation of surface water or permanent dewatering. Temporary dewatering may be required during construction for specific turbine foundations and/or electrical trenches. Project facilities will be designed to avoid impacts on surface water resources to the extent practicable. Wind turbines will be built on uplands to avoid surface water resources in the lower elevations. However, Project facilities, such as underground electrical collector lines, access roads, crane paths, turbine pads, and the O&M building, will impact land, and therefore, potentially impact surface water runoff within the Project Area. Ground disturbing construction activities may also cause sedimentation. These impacts are expected to be minimal.<sup>197</sup>

144. The Project will not impact any known floodplain area.<sup>198</sup>

145. Turbines will be constructed on high portions of the Project Area to maximize the wind resource, and thus are likely to avoid direct impact to wetlands, which tend to be in lower topographic positions. Access roads and substations will be designed to avoid impacts to wetlands whenever feasible. Installation of underground utilities is expected to avoid impacts by boring under surface water features as necessary.<sup>199</sup> Formal wetland delineations will be conducted in the Project Area prior to construction. Layout of turbines, access roads, and other facilities will be designed to avoid and minimize wetland impacts to the extent possible. If wetland impacts cannot be avoided, the Applicant will submit Section 404 and Minnesota Wetland Conservation

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<sup>195</sup> Order Issuing Draft Site Permit, Section 7.11, eDocket ID 20143-97230-01.

<sup>196</sup> Application at 55-56.

<sup>197</sup> *Id.* at 57.

<sup>198</sup> *Id.* at 57.

<sup>199</sup> *Id.* at 59.

Act permit applications to the U.S. Army Corps of Engineers and the state prior to construction.<sup>200</sup>

## **U. Future Development and Expansion**

146. The Project is located in southwest Minnesota, an area that is home to many other large-scale wind facilities.<sup>201</sup>

147. The Commission is responsible for the siting of LWECS “in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.”<sup>202</sup>

148. Section 4.1 of the site permit provides for buffers between adjacent wind generation projects to protect production potential.<sup>203</sup>

149. There is no evidence in the record that the Project is inconsistent with any future development or expansion plans.

## **V. Maintenance**

150. Each wind turbine in the Project will communicate directly with the Supervisory Control and Data Acquisition system (SCADA) for performance monitoring, energy reporting, and trouble-shooting. The SCADA system also provides the overall control of the wind farm. The O&M field duties include performing all scheduled and unscheduled maintenance including periodic operational checks and tests and regular preventive maintenance on all turbines, related plant facilities and equipment, safety systems, controls, instruments, and machinery.<sup>204</sup> Equipment will be monitored by local O&M staff and remotely by the Applicant’s operations and power scheduling desk, which is staffed 24 hours a day. When needed during off hours, local personnel will be dispatched to the site by the remote monitoring staff.<sup>205</sup>

## **W. Decommissioning and Restoration**

151. Odell has proposed a Project decommissioning and restoration plan to meet the requirements of Minn. R. 7854.0500, subp. 13. At the end of commercial operation, Odell or the Project owners will be responsible for removing wind facilities and removing the turbine foundations to a depth of four feet below grade. Odell has reserved the right to extend operations instead of decommissioning at the end of the site permit term. As necessary, Odell may apply for an extension of the LWECS Site Permit to continue operation of the Project. In this case, a decision may be made on whether to continue operation with existing equipment or to retrofit the turbines and

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<sup>200</sup> Application at 60.

<sup>201</sup> *Id.* at 26.

<sup>202</sup> Minn. Stat. § 216F.03.

<sup>203</sup> Order Issuing Draft Site Permit, Section 4.1, eDocket ID 20143-97230-01.

<sup>204</sup> Application at 84.

<sup>205</sup> *Id.* at 85.

power system with upgrades based on newer technologies.<sup>206</sup> Odell has committed to complete decommissioning and restoration activities within 12 months after the date the Project ceases to operate.<sup>207</sup>

152. Decommissioning activities will include: (1) removal of all wind turbine components and towers; (2) removal of foundations; (3) removal of overhead and underground cables and lines; (4) removal of substation and interconnection facilities; (5) removal of access roads; and (6) restoration and reclamation of the site to its pre-project topography and topsoil quality.<sup>208</sup>

153. As provided in section 9.1 of the site permit, the Applicant will ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the Project at the appropriate time.<sup>209</sup> Section 9.1 requires the Applicant to submit a Decommissioning Plan to the Commission prior to the pre-operation meeting and provide updates on the plan every five years.<sup>210</sup>

## **XI. Site Permit Conditions**

154. The draft site permit issued on March 11, 2014 includes a number of proposed permit conditions, many of which have been discussed above. The conditions apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other aspects of the Project.<sup>211</sup>

155. Many of the conditions contained in the draft site permit were established as part of the site permit proceedings involving other wind turbine projects permitted by the Commission. Comments received by the Commission have been considered in development of the draft site permit for this Project.

156. On April 17, 2014, Odell provided its suggested changes to the draft site permit. Many of the suggested revisions are meant to clarify or correct permit provisions. A few are more substantive. Those include:

- Adding language to **Section 5.8 (Complaints)** to clarify that the Permittee must provide a copy of the complaint procedures that were efiled prior to the pre-construction meeting to all local government officials and landowners listed in Section 5.2 of the permit no later than five days before the start of construction.
- Deleting language in **Section 6.8 (Project Energy Production)** to remove the presumption that all data filed under that provision is public. Section 11.7 addresses procedures for handling trade secret or other proprietary

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<sup>206</sup> *Id.* at 87-88.

<sup>207</sup> *Id.* at 90.

<sup>208</sup> *Id.* at 88-89.

<sup>209</sup> Order Issuing Draft Site Permit, (March 11, 2014) Section 9.1, eDocket ID 20143-97230-01.

<sup>210</sup> *Id.*

<sup>211</sup> Order Issuing Draft Site Permit (March 11, 2014) eDocket ID 20143-97230-01.

information. Odell notes that prior site permits issued by the Commission do not identify the information in 6.8 as public.<sup>212</sup>

- Changing language in **Section 9.1 (Decommissioning)** to require the Permittee to provide updates regarding its decommissioning plan every five years, rather than every two years, so that the reporting coincides with the periodic permit reviews conducted under Section 11.1 of the permit.
- Deleting language in **Section 11.5 (Transfer of Permit)** to clarify when the Permittee must notify the Commission of changes in upstream ownership affecting the Permittee.

157. The EERA submitted comments on April 25, 2014, responding to Odell's proposed revisions to the draft permit language.<sup>213</sup> The EERA did not object to the additional language proposed by Odell for Section 5.8. The EERA found the proposed language clarifying that the Permittee must provide a copy of the complaint procedures no later than five days before the start of construction to be acceptable.

158. The EERA opposes Odell's request that the last sentence in Section 6.8 be deleted to remove the presumption that all data filed under this section is public. The EERA recommends retaining this language.<sup>214</sup>

159. With respect to Odell's proposed changes to Section 9.1 that it be allowed to provide updates regarding its decommissioning plan every five years rather than every two years, the EERA requests that the language not be amended at this time and that the Commission be allowed to consider this request and make a determination at the time of the permit issuance. The EERA concedes that the suggestion has merit.<sup>215</sup>

160. With respect to Odell's proposed revisions to Section 11.5 regarding transfer of the permit, the EERA opposes this change because it maintains it will relax Odell's notification responsibilities and hinder the Commission's ability to determine the entities responsible for adhering to the Site Permit.<sup>216</sup>

161. Odell also proposed changing language in Section 6.7.1 and 13.1 to identify its April 17, 2014, Avian and Bat Protection Plan (ABPP) as the final version of the document. Odell also requests that bird and bat fatality estimates be provided only "as applicable." According to Odell, adding the phrase "as applicable" clarifies that the fatality estimates are not required in years where the data is not available.<sup>217</sup>

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<sup>212</sup> See Findings of Fact, Conclusions of Law and Order Issuing Site Permit to Black Oak Wind, LLC, for the Black Oak Wind Farm, Docket No. IP-6853/WS-10-1240 at 11; Findings of Fact, Conclusions of Law and Order Issuing a Site Permit to Getty Wind Company, LLC for the Getty Wind Project, Docket No. IP-6866/WS-11-831 at 11; and Order Amending Site Permit, Docket No. IP-6830/WS-10-49 at 11 and 12.

<sup>213</sup> EERA Comments (April 25, 2014), eDocket ID No. 20144-98745-01.

<sup>214</sup> *Id.* at 8.

<sup>215</sup> *Id.*

<sup>216</sup> *Id.* at 9-10.

<sup>217</sup> Odell Comments (April 17, 2014), at 5, eDocket ID No. 20144-98453-06.

162. The EERA opposes these proposed changes and believes they would result in a substantial change to the Draft Site Permit. The EERA stated that it, the DNR, and the USFWS had not had sufficient time to review the most recent version of the ABPP document that was efiled by Odell on April 17, 2014. Therefore, the EERA recommends that Sections 6.7.1 and 13.1 retain the open date language to allow EERA, DNR and UFFWS further time to review and comment on the ABPP.<sup>218</sup>

163. The EERA proposed additional revisions to the draft site permit conditions. EERA Staff recommends that the “Department of Commerce – Environmental Review Manager” be added to the list of persons and entities that Odell is required to consult when designing and conducting required field inventories of existing wildlife and natural areas under Section 6.1. Similarly, EERA Staff recommends that the “Department of Commerce – Environmental Review Manger” be added to those consulted in Attachment 4 at 4.7 regarding the Native Prairie Protection Plan and Attachment 4 at 6.7 regarding the Avian and Bat Protection Plan. Odell did not oppose these proposed changes.<sup>219</sup>

164. Any of the foregoing findings, which more properly should be designated as conclusions, are hereby adopted as such.

Based on the foregoing findings, the Administrative Law Judge makes the following:

### **CONCLUSIONS OF LAW**

1. The Commission and the Administrative Law Judge have jurisdiction over Odell's Site Permit Application for the Project pursuant to Minn. Stat. § 216F.04.

2. Odell has substantially complied with the procedural requirements of Minn. Stat. ch. 216F and Minn. R. ch. 7854.

3. The Commission has complied with all procedural requirements required by Minn. Stat. ch. 216F and Minn. R. ch. 7854.

4. A public hearing was conducted in a community near the proposed Project. Proper notice of the public hearing was provided, and the public was given the opportunity to speak at the hearing and to submit written comments.

5. The Commission has the authority under Minn. Stat. § 216F.04 to place conditions in a LWECS site permit.

6. The draft site permit contains a number of important mitigation measures and other reasonable conditions.

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<sup>218</sup> EERA Comments (April 25, 2014,) at 9-10, eDocket ID No. 20144-98745-01.

<sup>219</sup> EERA Comments (April 17, 2014), eDocket ID No. 20144-98450-01.

7. It is reasonable and appropriate to amend the draft site permit to include the changes to the Opening Paragraph and Sections 1.0, 2.1, 5.8, 6.1, 6.7.3, 6.8, 9.1, Attachment 3, and Attachment 4 suggested by the parties.

8. With regard to Odell's requested change to Section 6.8, the ALJ is persuaded that the last sentence should be deleted. This section directs the Permittee to file an annual report with the Commission on the monthly energy production of the Project that includes specific items of data. The final item in the list of information required to be submitted encompasses "any other information reasonably requested by the Commission." This item is so broad and non-specific that it is impossible to determine whether the information the Commission may request will be public. Therefore, the sentence stating that the information "shall be considered public" should be deleted and instead, the Commission may wish to add a sentence directing the Permittee to submit any information it deems to be non-public pursuant to Section 11.7 of the draft site permit and the Commission's data practices policies and procedures.

9. With respect to Odell's proposed changes to Section 9.1, the ALJ finds that it is reasonable for the updates regarding its decommissioning plan to be provided at the same time as the periodic permit reviews under Section 11.1. The ALJ therefore recommends that the language of Section 9.1 be revised as requested by Odell and that the Permittee be allowed to provide updates regarding its decommissioning plan every five years.

10. With respect to Odell's proposed revisions to Section 11.5 regarding transfer of the permit, the ALJ agrees with the EERA and recommends that the Commission decline to make the revisions requested by Odell.

165. Finally it is recommended that the Commission deny Odell's request to identify the April 17, 2014, ABPP as the final version of that plan in Sections 6.7.1 and 13.1. It is further recommended that the Commission require that the ABPP be finalized before final permit issuance and then insert the appropriate date.

11. The Project, with the draft permit conditions revised as set forth above, satisfies the site permit criteria for an LWECS in Minn. Stat. § 216F.03 and meets all other applicable legal requirements.

12. The Project, with the permit conditions discussed above, does not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.<sup>220</sup>

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<sup>220</sup> Minn. Stat. chs. 116B and 116D.

Based on the Conclusions of Law, the Administrative Law Judge makes the following:

### **RECOMMENDATION**

IT IS HEREBY RECOMMENDED that the Commission issue a site permit to Odell Wind Farm, LLC to construct and operate the up to 200 MW Odell Wind Project in Cottonwood, Jackson, Martin, and Watonwan Counties, Minnesota, and that the permit include the draft permit conditions amended as set forth in paragraph 7 of the Conclusions above.

Dated: May 23, 2014

s/Barbara L. Neilson  
BARBARA L. NEILSON  
Administrative Law Judge

### **NOTICE**

Notice is hereby given that exceptions to this Report, if any, by any party adversely affected must be filed under the time frames established in the Commission's rules of practice and procedure, Minn. R. 7829.2700 and 7829.3100, unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Oral argument before a majority of the Commission will be permitted pursuant to Part 7829.2700, Subpart 3. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held.

The Commission may, at its own discretion, accept, modify, or reject the Administrative Law Judge's recommendations. The recommendations of the Administrative Law Judge have no legal effect unless expressly adopted by the Commission as its final order.